
City of Amesbury Water Pollution Abatement Facility

2020 - 2021 Annual Industrial Pretreatment Program Implementation Report

Prepared for: US Environmental Protection Agency

By: Brian J. LeBlanc, City of Amesbury; IPP Coordinator

October 6, 2021

Table of Contents

Chapter One

Introduction	Page 1
Scope and Purpose	Page 1

Chapter Two

Program Effectiveness	Page 2
Industrial User Compliance	Page 2
POTW Analytical Results	Page 2
Industrial User Cooperation	Page 2

Chapter Three

Conclusion	Page 3
------------	--------

Appendix One

Annual Report Information	Page 4
---------------------------	--------

Appendix Two

Supporting Analytical Data	Page 8
----------------------------	--------

Appendix Three

Pretreatment Annual Report Summary	Page 13
------------------------------------	---------

Appendix Four

PCI/Audit Response Report	Page 15
---------------------------	---------

Chapter 1

Introduction

As part of an ongoing compliance monitoring and reporting program, the City of Amesbury IPP respectfully submits this document as its required annual report. This report, its appendices and attachments are submitted in accordance with regulations and requirements set forth in National Pollutant Discharge Elimination System permit number MA0101745 Part1 (C), and 40 CFR 403.12 (i).

Your receipt of this document is meant to satisfy the City's obligations under said regulations for the reporting year 2020 – 2021.

Scope and Purpose

The purpose of this report is to keep all regulatory agencies, both state and federal, up to date as to the continued implementation and development of the City's IPP. This report is meant to outline the City's continued efforts in industrial compliance monitoring and demonstrate its ability to foster working relations with the business sector. This report's scope will encompass and reflect all necessary components as delineated in 40 CFR 403.12(i), which reads as follows:

(i) Annual POTW reports. POTW's with approved Pretreatment Programs shall provide the Approval Authority with a report that briefly describes the POTW's program activities, including activities of all participating agencies, if more than one jurisdiction is involved in the local program. The report required by this section shall be submitted no later than one year after approval of the POTW's Pretreatment Program, and at least annually thereafter, and shall include, at a minimum, the following:

(1) An updated list of the POTW's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The POTW shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical Pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The POTW shall also list the Industrial Users that are subject only to local Requirements. The list must also identify Industrial Users subject to categorical Pretreatment Standards that are subject to reduced reporting requirements under paragraph (e)(3), and identify which Industrial Users are Non-Significant Categorical Industrial Users.

(2) A summary of the status of Industrial User compliance over the reporting period;

(3) A summary of compliance and enforcement activities (including inspections) conducted by the POTW during the reporting period;

(4) A summary of changes to the POTW's pretreatment program that have not been previously reported to the Approval Authority; and

(5) Any other relevant information requested by the Approval Authority.

Again this document shall attempt to satisfy all of the above elements, allowing this document to be a complete submission.

Chapter 2

Program Effectiveness

In order to fully describe program effectiveness, this report shall divide this topic into three (3) separate constituents. These constituents are; Industrial User Compliance, POTW Analytical Results, and Industrial User Cooperation. Each topic will be touched upon in the following sections.

Industrial User Compliance

The IPP tracks industrial compliance in three ways, industrial user self monitoring, IPP sampling and Industrial user inspections.

Since the last report the IPP is still only focused on three SIU's. Of our industrial users, Specialty Machine did not discharge again this year, leaving the City with two daily discharging industrial users, one of which is in the process of eliminating process discharge completely, if that change occurs, their permit will either be altered or removed. That will be decided by the City and the industry after discussions on future production needs.

All facilities involved with the IPP, were re-permitted in December 2019 and were in continuous compliance with all aspects of the program. There were no violations of reporting requirements, or effluent standards by any facility during the program year. In addition, the City did not identify any violations or questionable practices during our yearly inspections.

POTW Analytical Results

Throughout the year the Amesbury Water Pollution Abatement facility staff conducts sampling and analysis of the influent, the effluent and the biosolids of the plant in order to identify problems, institute operational changes and comply with state and federal guidelines. During the past year the plant staff has not encountered any interference, pass through, or deleterious effect that could be attributable to industrial discharge. Pollutant levels and regulatory comparisons are contained in appendix two of this report.

Industrial User Cooperation

Consistently thru the years the City's industrial users have been excellent in their continued compliance. This year has been no exception. All IU's have been diligent in their compliance efforts. Even with the unexpected changes and burdens that have been imposed by the Covid-19 pandemic all of the City's permittees have been both understanding and at ease at making accommodations when necessary.

Chapter 3

Conclusion

The City is still awaiting the issue of its draft NPDES permit which was applied for and will address any and all issues that arise from that document. The three facilities that are permitted in the city were deemed essential service providers and were able to stay active during the pandemic shutdown. Munters builds and services industrial dehumidification units and VOC removal units that were both needed by labs across the country. While continuing to stay in operation, this facility has experienced a number of Covid outbreaks and the accompanying isolation and quarantine periods, yet has stayed in operation. Applied Graphics was able to switch gears and began creating face shields for front line workers. This year while they continue with the manufacture of face shields, they have been slowly returning to their normal processes, but as with most facilities delivery of raw materials has slowed this process slightly. The major contracts at Specialty Machine continue to be from Sig Sauer firearms, and they still have not discharged wastewater in a number of years. We have begun to see some new business in the city but have not been affected thus far by the discharges, so while in contact with the facilities (mostly small breweries and marijuana grow houses), we have not issued any permits as of the time of this report. We now have three cannabis growing facilities up and running and a number of small breweries which have been continuing construction in the old carriage mill buildings regardless of the pandemic. Since the City has no conventional pollutant local limitations, we are still discussing our alternatives and/or BMP's, and the City will address the need for local limitations if necessary. In August of 2021 the Agency conducted a PCI/Audit of the IPP. The audit report has been received and a written response was sent to EPA on October 4, 2021, a copy of which is included as appendix four. The IPP continues to work with our few remaining industries to keep our relationships established and compliance the norm.

Appendix One

2020 - 2021 Annual Report Information

Annual Report Information 2020 – 2021

Facility Name:	Applied Graphics
Facility Address:	Hunt Road, Amesbury MA 01913
Industrial User Category:	SU
Number of Inspections:	1
Dates of Inspections:	8/30/21
Number of Samplings:	3
Dates of Samplings:	8/25 - 26/21
Required Self-monitoring Reports Received:	Yes
Enforcement Actions Taken:	No
SNC Occurrence:	No
Permit Valid:	12/01/19 - 11/30/24
Year End Compliance Status:	Yes

Annual Report Information 2020 – 2021

Facility Name:	Munters - Cargocaire
Facility Address:	79 Monroe Street, Amesbury MA 01913
Industrial User Category:	SIU
Number of Inspections:	1
Dates of Inspections:	8/30/21
Number of Samplings:	2
Dates of Samplings:	8/17 - 18/21
Required Self-monitoring Reports Received:	Yes
Enforcement Actions Taken:	No
SNC Occurrence:	No
Permit Valid:	12/01/19 - 11/30/24
Year End Compliance Status:	Yes

Annual Report Information 2019 – 2020

Facility Name:	Specialty Machine
Facility Address:	County Road, Amesbury MA 01913
Industrial User Category:	SIU
Number of Inspections:	1
Dates of Inspections:	8/30/21
Number of Samplings:	0
Dates of Samplings:	No discharge (see text)
Required Self-monitoring Reports Received:	Yes
Enforcement Actions Taken:	No
SNC Occurrence:	No
Permit Valid:	12/01/19 - 11/30/24
Year End Compliance Status:	Yes

Appendix Two

Supporting Analytical Data

TABLE 1

**AMESBURY WATER POLLUTION ABATEMENT FACILITY
INFLUENT CONCENTRATIONS**

vs.

**REPORTED INHIBITION THRESHOLD LEVELS
ACTIVATED SLUDGE SYSTEMS**

POLLUTANT	ACTIVATED SLUDGE INHIBITION CONCENTRATION	POTW INFLUENT CONCENTRATION 8/18/21	METHOD/DETECTION LIMIT
ARSENIC	0.10	BDL	200.8/0.005
CADMIUM	1.00 – 10.0	BDL	200.8/0.001
CHROMIUM	1.00 – 100.00	BDL	200.8/0.01
COPPER	1.0	0.060	200.8/0.01
LEAD	1.0 – 100.00	BDL	200.8/0.005
MERCURY	0.10 – 1.0	BDL	245.1/0.0002
MOLYBDENUM	unknown	0.049	200.8/0.01
NICKEL	1.00 – 5.0	BDL	200.8/0.01
SELENIUM	unknown	BDL	200.8/0.01
SILVER	0.25	BDL	200.8/0.005
ZINC	0.3 – 10.0	0.12	200.8/0.01
CYANIDE	0.1 – 5.0	BDL	SM4500CN/0.02

Notes:

1. All concentrations expressed as mg/l

References:

1. EPA's 40 Cities Study; Volume 1; Table 11, Page 61 and PRELIM: the EPA model for developing local limits, Page 3 – 21.
2. Jenkins, D.I., and Associates. 1984. *Impacts of Toxics on Treatment Literature Review*.
3. Russell, L.L., C.B. Cain, and D.I. Jenkins. 1984. *Impacts of Priority Pollutants on Publicly Owned Treatment Works Processes: A Literature Review*. 1984 Purdue Industrial Waste Conference.
4. Anthony, R.M., and L.H. Briemburst. 1981. *Determining Maximum Influent Concentrations of Priority Pollutants for Treatment Plants*. Journal Water Pollution Control Federation 53(10): 1457 - 1468

TABLE 2

**AMESBURY WATER POLLUTION ABATEMENT FACILITY
EFFLUENT CONCENTRATIONS**

vs.

EPA GOLD BOOK AQUATIC WATER QUALITY CRITERIA¹

POLLUTANT	ACUTE TOXICITY WATER QUALITY	CHRONIC TOXICITY WATER QUALITY	POTW EFFLUENT CONC. 8/18/21	METHOD/DETECTION LIMIT	POTW EFFLUENT AFTER DILUTION
ARSENIC	0.069	0.036	BDL	200.8/0.005	0.00002
CADMIUM	0.04	0.0088	BDL	200.8/0.001	0.000004
CHROMIUM	1.1	0.05	BDL	200.8/0.01	0.00004
COPPER	0.0048	0.0031	BDL	200.8/0.01	0.00004
LEAD	0.21	0.0081	BDL	200.8/0.005	0.00003
MERCURY	0.0018	0.00094	BDL	245.1/0.0002	0.0000008
MOLYBDENUM	NA	NA	0.013	200.8/0.01	0.000047
NICKEL	0.074	0.0082	BDL	200.8/0.01	0.00004
SELENIUM	0.29	0.071	BDL	200.8/0.01	0.00004
SILVER	0.0019	NA	BDL	200.8/0.005	0.00002
ZINC	0.09	0.081	0.054	200.8/0.01	0.00019
CYANIDE	0.001	0.001	BDL	SM4500CN/0.02	0.00008

Notes:

1. USEPA National Recommended Water Quality Criteria: 2002, referencing salt water parameter concentrations for consistency with POTW's current NPDES permit.
2. All concentrations as mg/l.
3. Dilution concentrations were made assuming a 7Q10 of 652.7 MGD for the Merrimac River and a POTW flow of 2.4 MGD.
4. Where no effluent concentration was below detection, the detection limit was used for the calculation.

TABLE 3**AMESBURY WATER POLLUTION ABATEMENT FACILITY
DEWATERED SLUDGE METALS CONCENTRATION 9/8/21****vs.
UNRESTRICTED USAGE LIMITS¹**

PARAMETER	UNRESTRICTED USAGE LIMITS MG/KG	POTW DEWATERED SLUDGE METALS CONCENTRATIONS UG/G (9/8/21)	METHOD/DETECTION LIMIT
ARSENIC	41	12	SW3051A6020A/4.8 UG/G
BORON	300	15	SW3051A6020A/9.5 UG/G
CADMIUM	14	< 0.95	SW3051A6020A/0.95 UG/G
CHROMIUM	1000	22	SW3051A6020A/9.5 UG/G
COPPER	1000	310	SW3051A6020A/9.5 UG/G
LEAD	300	16	SW3051A6020A/4.8 UG/G
MERCURY	10	< 0.30	SW7471B/0.30 UG/G
MOLYBDENUM	10	11	SW3051A6020A/9.5 UG/G
NICKEL	200	14	SW3051A6020A/9.5 UG/G
SELENIUM	36	< 9.5	SW3051A6020A/9.5 UG/G
SILVER	NA	< 4.8	SW3051A6020A/4.8 UG/G
ZINC	2500	360	SW3051A6020A/9.5 UG/G

NOTES:

1. Unrestricted usage limits reflect MA DEP type 1 concentration limits or EPA part 503 levels for exceptional quality (whichever is most stringent) as AWPAP dewatered sludge is composted in Ipswich MA.

TABLE 4

**SURVIVAL DATA / BIOASSAY TESTING
AMESBURY WATER POLLUTION ABATEMENT FACILITY
JULY 2018 – JULY 2021**

Survival	Exposure	100%	50%	25%	12.5%	6.25%	Site	Lab
<i>July 2018</i>								
Americamysis Bahia	48 Hours	62.5	97.5	95	97.5	97.5	95	97.5
<i>October 2018</i>								
Americamysis Bahia	48 Hours	100	100	97.5	100	97.5	100	100
<i>July 2019</i>								
Americamysis Bahia	48 Hours	97.5	97.5	97.5	95	100	100	100
<i>October 2019</i>								
Americamysis Bahia	48 Hours	97.5	100	100	97.5	100	100	100
<i>July 2020</i>								
Americamysis Bahia	48 Hours	100	100	100	100	100	100	100
<i>October 2020</i>								
Americamysis Bahia	48 Hours	100	100	100	100	97.5	100	100
<i>July 2021</i>								
Americamysis Bahia	48 Hours	100	97.5	100	100	100	100	97.5

Appendix Three

Pretreatment Annual Report Summary

EPA Region 1 Annual Pretreatment Report Summary Sheet

POTW Name:	Amesbury Water Pollution Abatement Facility	
NPDES Permit #:	MA0101745	
Pretreatment Report Period Start Date:	September 1, 2020	
Pretreatment Report Period End Date:	August 31, 2021	
# of Significant Industrial Users (SIUs):	3	
# of SIUs Without Control Mechanisms:	0	
# of SIUs not Inspected:	0	
# of SIUs not Sampled:	0	
# of SIUs in Significant Noncompliance (SNC) with Pretreatment Standards:	0	
# of SIUs in SNC with Reporting Requirements:	0	
# of SIUs in SNC with Pretreatment Compliance Schedule:	0	
# of SIUs in SNC Published in Newspaper:	0	
# of SIUs with Compliance Schedules:	0	
# of Violation Notices Issued to SIUs:	0	
# of Administrative Orders Issued to SIUs:	0	
# of Civil Suits Filed Against SIUs:	0	
# of Criminal Suits Filed Against SIUs:	0	
# of Categorical Industrial Users (CIUs):	0	
# of CIUs in SNC:	0	

Penalties

Total Dollar Amount of Penalties Collected \$ 0

of IUs from which Penalties have been collected: 0

Local Limits

Date of Most Recent Technical Evaluation of Local Limits: July 2004

Date of Most Recent Adoption of Technically Based Local Limits: April 29, 1997

Pollutant	Limit (mg/l)	MAHL (lb/day)
Arsenic	0.67	0.854
Cadmium	0.55	0.545
Chromium	6.84	14.261
Copper	3.01	7.656
Lead	0.67	1.426
Mercury	0.07	0.272
Molybdenum	2.95	4.019
Nickel	6.84	9.610
Selenium	1.69	1.922
Silver	0.33	1.338
Zinc	3.01	7.131
Cyanide	0.64	1.426
pH	6.5 – 9.5	not established
FOG	165	1125.9
TTO	2.13	not established